

On July 21, 1939, the writer, accompanied by Dr. R. H. True, found an extensive stand in Berwick, Maine. An estimate of the total acreage of *Chamaecyparis thyoides* in York County approaches 1000 acres. Botanists exploring bogs and cedar swamps in the coastal area between Kittery and the Penobscot Valley may well keep the tree in mind.—OLIVER M. NEAL, JR., Michigan State College.

TRAVELS OF ASA GRAY IN WESTERN VIRGINIA, 1843*

EARL L. CORE

In August, 1843, Asa Gray traversed the mountains of what is now West Virginia in the course of one of his expeditions to the Southern Appalachians, large portions of which were then relatively unknown botanically. Although several interesting discoveries marked his progress, his journal for this period is comparatively barren, alongside the detailed records of his explorations farther south in North Carolina. Millspaugh¹ reports that he was unable to trace his route through the State. Nevertheless, from the labels on some of his collections, from our knowledge of the highways existing in that day, and from the scanty references in his writings, it has been possible to outline his travels in this area with a considerable degree of accuracy.

Dr. Gray's first journey to the Southern Appalachians was made in 1841, a report of which was published in the American Journal of Science, in the form of a letter to Sir William Hooker.²

Although he expected to make many such southern expeditions (see his letter to W. J. Hooker, May 30, 1840), he was prevented from undertaking them because of the time required for the Flora of North America.³ The new territories west of the Mississippi were being opened to exploration and for many years continually yielded an immense amount of new botanical material. Torrey and Gray interested themselves in the various

* Contribution No. 13 from the Herbarium of West Virginia University.

¹ W. Va. Geol. Surv. 5 (A): 4. 1913.

² Amer. Jour. Sci. Ser. 1. 42: 1-49. 1841.

³ A Flora of North America; containing abridged descriptions of all the known indigenous and naturalized plants growing north of Mexico; arranged according to the natural system. By John Torrey and Asa Gray. New York. 8vo; 1: 1838-1840, pp. xvi + 711; 2: 1841-1843, pp. 504.

expeditions, boundary surveys, and the like, and were constantly hard at work studying the collections that came in.

On April 30, 1842 Dr. Gray was appointed to the Fisher professorship of Natural History in Harvard College, removing in July to Cambridge, where, in addition to his teaching duties, he continued his research and writing, busier than ever. However, in the summer of 1843, with the sanction of the president and board of the college (see letter to Mrs. Torrey, July 22, 1843), he found time to break away from his work long enough to make the second of his southern tours.

He left Cambridge on August 11 for New York, from there proceeding to "the Alleghany Mountains in the north of Virginia", where he was to meet his friend, William Starling Sullivant, of Columbus, Ohio. The chief object of the expedition, from Dr. Gray's standpoint, was to "obtain live plants and seeds"; they expected to be too late in the season for the best botanizing, although he thought that he should "be in the best time for *Compositae*". Mr. Sullivant planned to devote "his attention primarily to the *Musci*"; between the two of them, they hoped to "let nothing escape".⁴

The expedition lasted nearly three months (Gray returned to Cambridge on November 3),⁵ but while "the later and more interesting part" of the journey, in North Carolina, receives several pages of mention in letters and entries in his journal, the "long journey through Virginia" is dismissed in a more summary fashion. Sullivant was a pleasant companion and Gray recalled, years later, "the varied incidents of the arduous but delightful journey, . . . the laborious mountain ascents, the night bivouacs, the healthful woodland life and primitive fare, and the many amusing adventures" of the tour which took them "along the principal length of the Alleghany Mountains, through much of their most picturesque scenery, and through regions which abound with the choicest botanical treasures which the country affords".⁶

Late in August the two friends met, apparently somewhere in the highlands of Western Maryland. Following the National Road (now U. S. Route 40) west from the Potomac at Cumber-

⁴ Letter to W. J. Hooker, 11th August, 1843.

⁵ See letter to George Engelmann, November 4, 1843.

⁶ Amer. Jour. Sci. ser. 2. 1: 79. 1846.

land, "the Great Back Bone of the Alleghanies was crossed in Maryland, where it presents a pretty formidable elevation,⁷ and several plants were observed which were thought to be confined to a more southern range, such as *Menziesia globularis* and *Galium latifolium*. The open *glades* on the other side presented many features of Kentucky vegetation".⁸

Leaving the National Road, probably at what is now known as Keyser's Ridge, the two explorers proceeded southwards through Oakland, Maryland, and entered Virginia "near Mount Carmel Town", in Preston County. From this point they descended via Horse Shoe Run to Cheat River at or near Westernford,⁹ in Randolph County, thence to Tygarts Valley River. Their course through this "rude, wild region" must have been in general that now followed by U. S. Route 219.

After ascending the beautiful Tygarts Valley, years later the happy hunting ground for Millspaugh,¹⁰ "the high Cheat Mountain was then traversed nearly where it merges in the Green Brier range, and *Angelica Curtisii*, Buckl., as well as *Aconitum reclinatum*, Gray, were first met with".¹¹ It is an interesting observation to note that in Robinson and Fernald's 7th edition of Gray's Manual, published in 1908, the range of *Aconitum reclinatum* is given as "Cheat Mt., Va., and southwards in the Alleghenies"¹² despite the fact that the point at which Gray collected the plant, on Cheat Mt., had been West Virginia territory for nearly half a century. Rydberg's *A. vaccarum*,¹³ based on a plant he collected near Spruce Knob, in Pendleton County, West Virginia, is a representative of this species and should be so called. The only other known station for the plant in West Virginia is at Spruce, on the headwaters of Cheat River, in Pocahontas County. The present known distribution of *Angelica Curtisii* in West Virginia may be indicated as follows: Pendleton County: Spruce Knob, *Mr. and*

⁷ The elevation is 2860 ft. at the point U. S. Route 40 crosses Big Savage Mt., as the northeastern continuation of Backbone Mt. is now called.

⁸ Amer. Jour. Sci. ser. 2. 1: 79. 1846.

⁹ Later St. George, which became the county seat of Tucker County when that county was separated from Randolph in 1856. Parsons, the present county seat, did not then exist.

¹⁰ See Core, Contributions of Charles Frederick Millspaugh to the Botany of West Virginia. Proc. W. Va. Acad. Sci. 8: 82-93. 1935.

¹¹ Amer. Jour. Sci. ser. 2. 1: 80. 1846.

¹² Manual, p. 407.

¹³ Torrey 26: 31. pl. 1. 1926.

Mrs. Davis; Pocahontas County: Cass, *W. V. U. Bot. Exped.*; Grant County: Gormaniana, *Core* 3716.

In their trip across "the high Cheat Mountain",¹⁴ the two travellers were benefited by the recently completed section of the Staunton and Parkersburg Turnpike traversing that area. This highway was authorized by an act of the Virginia Legislature in 1823, but appropriations were slow in following the authorization and it was not until 1842 that the road was extended down the Tygarts Valley River through Beverly, then the county seat of Randolph County. The splendid grades¹⁵ of the Turnpike through the unbroken forest of Cheat Mountain must have made the penetration of this remote region quite easy indeed. Their "way crossed a towering range, hung above a far veil of unbroken spruce, forded swift glittering streams, and followed a road that passed rare isolated dwellings, dominating rocky and precarious patches and hills of cultivation".¹⁶

Eighteen years later, in the fall of 1861, Confederate and Union forces were marching and countermarching along this highway in the War between the States and a Union camp on the summit of Cheat Mountain was the highest point occupied by soldiers during the War. "The celebrated Battle Above the Clouds, on Lookout Mountain, was not one-half so high".¹⁷

East of the mountain, Gray and Sullivant descended to the Greenbrier River, the region of Hergesheimer's "Tol'able David," into a valley which "extended in deep green pastures and sparkling water between two high mountainous walls drawn across east and west. In the morning the rising sun cast long delicate shadows on one side; at evening the shadow troops lengthened across the emerald valley from the other".¹⁸

It is likely that the two travellers spent an August night at the far-famed hostelry, Traveller's Repose. This old Tavern

¹⁴ Cheat Mountain has an elevation of 3798 ft. at the point traversed by the Turnpike, and 4433 ft. at Barton Knob, overlooking the Turnpike.

¹⁵ This section was located by Claudius Crozet, who was formerly a surveyor on the staff of Napoleon Bonaparte, and it is a splendid commentary on his ability that modern engineers, laying out the course of U. S. Route 250 across Cheat Mountain, did not diverge from Crozet's survey at a single point along the 3-mile ascent of the western slope. See I. F. Boughter, "Internal Improvements in Northwestern Virginia," pp. 189-193, 205-214.

¹⁶ From "Tol'able David." This description is applied by Hergesheimer to the next range to the east, Alleghany Mountain, but is applicable here as well.

¹⁷ Hu Maxwell, "History of Randolph County," p. 140.

¹⁸ From "Tol'able David."

was established before 1800 by John Yeager and in 1843, under the management of Andrew, John's son, was in the midst of one of its busiest periods, as a regular stage-coach stop and tavern house on the newly completed Turnpike. This highway was heavily used by emigrants going west and by statesmen from the west going to and from Washington and Richmond. It is said that Abraham Lincoln, when a Congressman from Illinois, used to stop at this house. The building was burned by Federal troops in 1861. The old tavern register, probably bearing the names of Asa Gray and W. S. Sullivant, likewise went up in the flames.¹⁹

Instead of proceeding eastward along the route of the Staunton and Parkersburg Turnpike, across Alleghany Mountain, the two botanists here turned to the south, towards the little hamlet of Huntersville, then the county seat of Pocahontas County. "In the journey through Pocahontas County to Huntersville, fruiting specimens of the little known *Rhamnus parvifolius* Torr. and Gr. Fl., were collected, a species which proves to be a perfectly distinct one, and has also been found by Mr. Buckley in Alabama".²⁰ Trelease later decided, however, that *Rhamnus parvifolius* should appear as a synonym of *R. lanceolata* Pursh.²¹ Other known stations for this rare plant in West Virginia now include: Hampshire County: shale barren near Junction, *Strausbaugh*; Pendleton County: Smoke Hole, *Core* 4324.

Huntersville in 1843 "was by common consent regarded as a little place with large ways. It was no uncommon thing for Huntersville merchants to realize three or four hundred per cent on dry goods, and not much less on groceries",²² dispensing to hunters and settlers who came to town.

Turning again eastwards near Huntersville, Gray and Sullivant once more enjoyed the privilege of traversing a recently built thoroughfare, the Warm Springs and Huntersville Turnpike, completed about 1838. "It was a grand highway for that period, and awoke a sensation much like our people felt at seeing cars coming to Marlinton. Every stream was bridged from Hunters-

¹⁹ Pocahontas Times, January 25, 1940; an excellent article by Calvin Price on the history of Traveller's Repose.

²⁰ Amer. Jour. Sci. ser. 2. 1: 80. 1846.

²¹ Syn. Fl. N. Am. 1: pt. 1, 407. 1895-1897.

²² Wm. T. Price, "Historical Sketches of Pocahontas County," p. 587.

ville to the Warm Springs, and the means of communication at the time between those places seemed to be all that was desired or could be reasonably expected".²³

"In the route eastward across the mountains from Huntersville to the Warm Springs, the rare *Helianthus laevigatus*, Torr. and Gr., and *Andromeda floribunda*, Pursh., (which is *A. montana* of Buckley,) were abundantly found. A mountain meadow on Nap's [Knapp's] Creek, east of Huntersville, also furnished a stout *Gentian* with crowded ochroleucous flowers, and with much the habit of *G. Andrewsii*. It was naturally enough confounded with *G. ochroleuca*, and specimens have been distributed under this name. It is, however, quite a different species from the real *G. ochroleuca*, though it may be the plant figured under that name in Sims. Bot. Mag. t. 1551, as well as the form mentioned by Grisebach (in Hook. fl. Bor. Am.) as remarkable for its cordate-lanceolate leaves".²⁴ Temporary diagnostic characters were given for the new species, and it was named *G. flavida*. No mention is made in Gray's account of the extensive shale barrens between Huntersville and Warm Springs, nor of the interesting species now known to inhabit the barrens.

Other stations of *Helianthus laevigatus* in West Virginia, represented by specimens in the State Herbarium, include: Hardy County: South Branch Mountain, *Sharp*; Greenbrier County: Kate's Mountain, *W. V. U. Bot. Exped.*; Mineral County: Wild Meadow Run, *W. V. U. Bot. Exped.* *Andromeda floribunda* is still little known in West Virginia, although abundant enough in localities where it does occur. The distribution may be given as follows: Greenbrier County: Alleghany Mountains, *Hopkins*, Pendleton County: Top of Shenandoah Mountain, *Core 4895*; Pocahontas County: near Cass, *Fred W. Gray*. In addition to the Pocahontas County station, *Gentiana flavida* is now known from Greenbrier County, near White Sulphur Springs, where it was collected by Ben R. Roller.

"From the Warm Springs the expedition pursued its course, by way of the Hot Springs²⁵ and the white Sulphur Springs, along

²³ Ibid., p. 73.

²⁴ Amer. Jour. Sci. ser. 2. 1: 80. 1846.

²⁵ Their course in general must have followed the present U. S. Route 220 to Covington, thence U. S. Route 60 to White Sulphur Springs, thence U. S. Route 219 through Union, Salt Sulphur Springs, and Red Sulphur Springs.

the base of Peter's Mountain to the Kanawha [New] River, which was crossed at Toney's Ferry below Parisburg [Pearisburg], and thence to Tazewell county. In Giles County, soon after crossing the river, live roots of the very rare and distinct *Heuchera hispida*, Pursh, were obtained, which have been preserved in cultivation."²⁶

Summarizing, in a letter to John Torrey, written at Asheville, North Carolina, on September 30, Gray says: "Our long journey through Virginia brought us behind our estimated time, and hurried the later and more interesting part of our operations I doubt if I got anything of much interest in Virginia, except Buckley's (and Nuttall's) *Andromeda*, *Rhamnus parvifolius* on the waters of Greenbrier (where did Pursh get it?), *Heuchera pubescens* in fruit and *Heuchera hispida* Pursh !! out of flower and fruit, so that I detected it by the leaves only (and got good roots), not far from where Pursh discovered it, but more west, on the frontiers of a range of mountains where this very local species doubtless abounds".²⁷

The Bryophytic results of the expedition appeared in the form of a few privately distributed books which contained actual specimens of mosses collected by Sullivant and his friends. The complete title of this work was "Musci Alleghaniensis, sive Spicilegia Muscorum atque Hepaticarum quos in itinere a Marylandia usque ad Georgiam per tractus Montium A. D. MDCCCXLIII, decerpserunt Asa Gray et W. S. Sullivant: (interjectis nonnullis aliunde collectis) Cincinnavit et exposuit W. S. Sullivant. Fascis I, II, Columbus in Ohione MDCCCXLV."

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Morgantown

²⁶ Amer. Jour. Sci. ser. 2. 1: 81. 1846.

²⁷ See Wherry, "Heuchera hispida Pursh rediscovered." RHODORA 35: 118, 119. 1933.